

An Introduction to



MISSOURI FISHES



Duskystripe Shiner

Photos by William Pflieger unless otherwise credited

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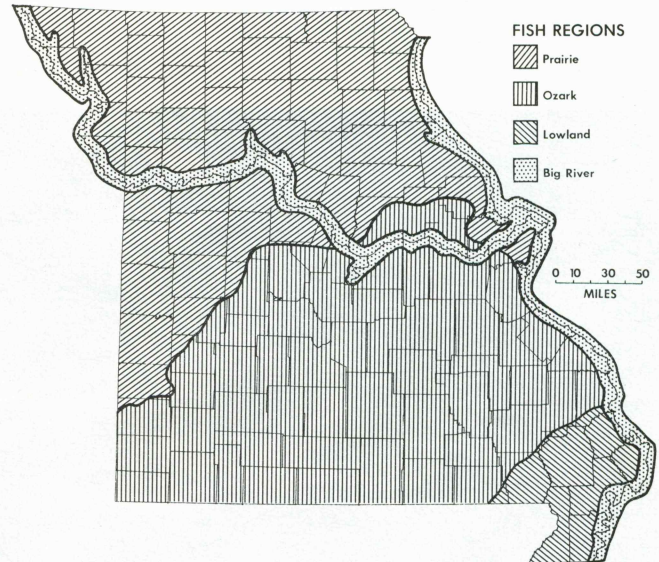
MISSOURI is home for 206 species of fishes, more than most other states. They range in size from the pygmy sunfish that matures at a length of an inch or less, to the paddlefish that reaches a weight of more than 100 pounds.

In Missouri, fish live almost everywhere there is water, but each type of water has its own characteristic species. Because fishes with similar requirements have similar patterns of distribution, four principal regions, each characterized by a particular assemblage of fishes, can be recognized. These regions are shown on the accompanying map.

Few kinds of fishes are restricted to a single region, but the regions serve to identify the typical habitat and abundance centers. There are transition areas where habitat conditions are favorable to a mixture of species from adjacent regions. Though some Missouri fishes are wide-ranging in occurrence, the ranges of many have become more limited because of extensive man-made habitat changes. The most obvious and most damaging man-made changes include large reservoir construction, stream channelization, water-removal projects and industrial, municipal and agricultural water pollution.

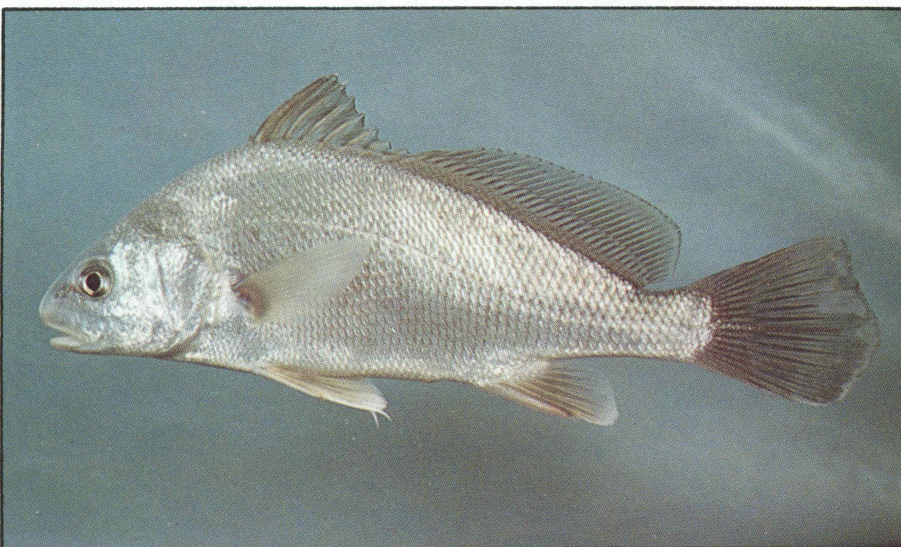
In this article, fish species representative of each region are illustrated and briefly discussed. Many are commonly caught by anglers; others go unnoticed because of

their size or habits. All are a part of our heritage of aquatic wildlife. More information on these and other fishes can be found in *The Fishes of Missouri* by William Pflieger, available from the Department of Conservation, P.O. Box 180, Jefferson City 65102. Hardbound copies are \$10 each (\$10.41 for Missouri residents), and softbound copies are \$7.50 each (\$7.81 for Missouri residents).



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Charles Purkett



Freshwater Drum
Aplodinotus grunniens
Drum family. Big-river region.

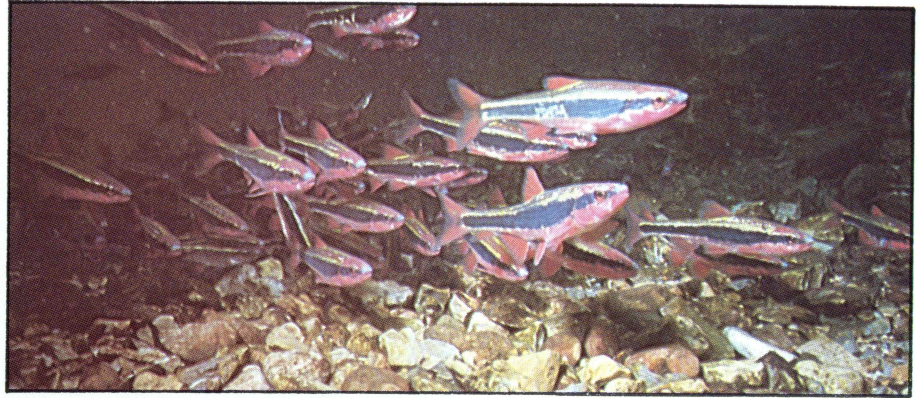
Most members of the drum family are marine fishes; only a single species is found in Missouri. The name comes from the grunting sounds produced by the air bladder. It is characteristic of large rivers and lakes, where it is a bottom-feeder on insects, crayfish and mollusks. Adults are commonly 12 to 20 inches long and weigh one to five pounds.

Duskystripe Shiner

Notropis pilsbryi

Minnow family. Ozark region.

The duskystripe shiner is one of several species of Ozark minnows that spawn over the gravel nests of its relative, the hornyhead chub. This school of brightly colored duskystripe shiners were photographed over a chub nest in Big Sugar Creek, McDonald County.

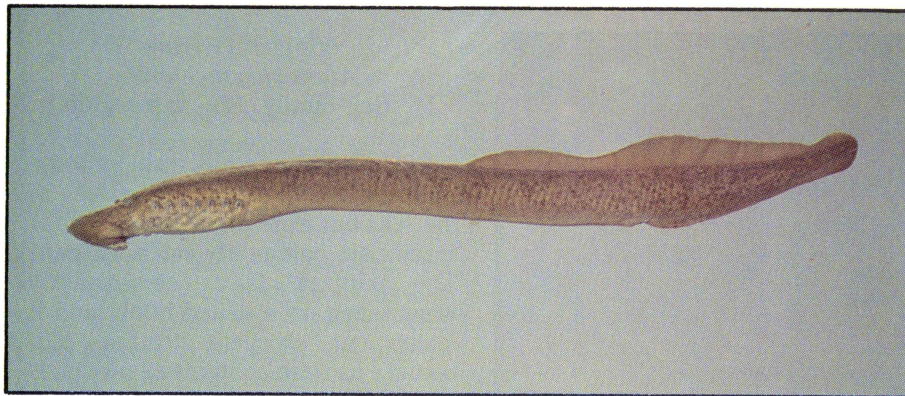


Chestnut Lamprey

Ichthyomyzon castaneus

Lamprey family. Big-river region.

Lampreys are primitive, jawless fishes, lack paired fins, and have seven porelike gill openings. The chestnut lamprey is the most abundant and widely distributed of the six species in Missouri. The chestnut lamprey has a larval and adult stage in the life cycle; only adults are parasitic. During the parasitic stage, lampreys are most often seen attached to fish during spring in large reservoirs. Adults reach a length of 10 to 12 inches.

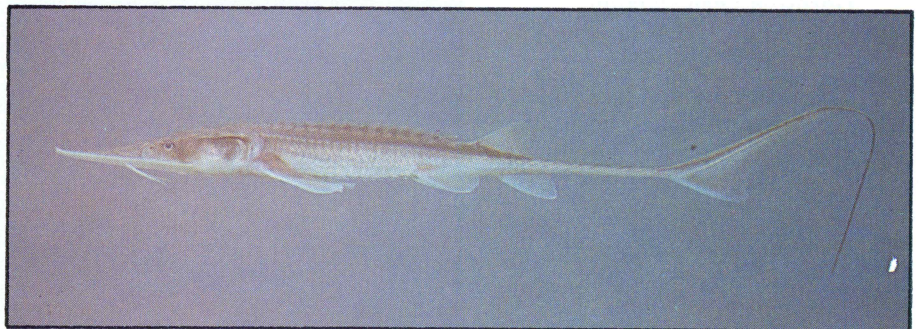


Shovelnose Sturgeon

Scaphirhynchus platyrhynchus

Sturgeon family. Big-river region.

The shovelnose is the most abundant of Missouri's three sturgeons; both the pallid and the lake sturgeon are rare in Missouri waters. The shovelnose feeds entirely from the bottom, using its highly protrusible mouth to suck up its food, which consists of aquatic insects. It is the smallest of our three sturgeons and seldom exceeds a length of 30 inches or a weight of five pounds.



Paddlefish

Polyodon spathula

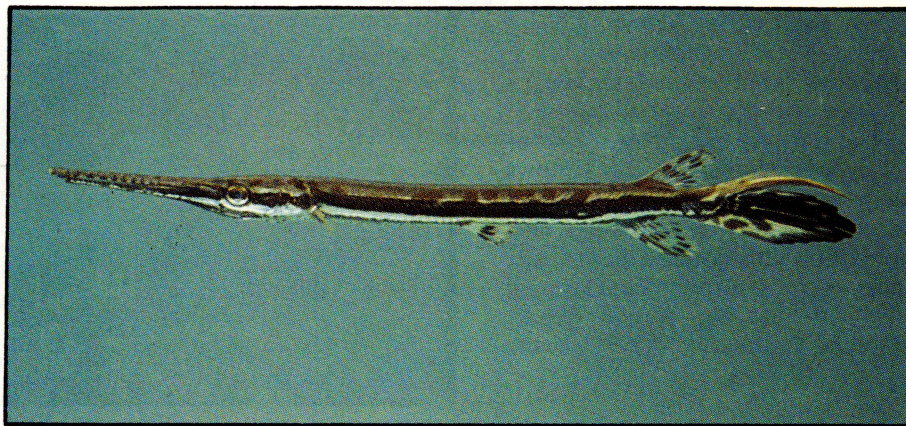
Paddlefish family. Big-river region.

The paddlefish family is represented by only two living species. One species occurs in the Mississippi River Valley, the other in the Yangtze Valley in China. The paddlefish is primitive, with a cartilage skeleton rather than bone. It swims about continuously in open water, feeding on microcrustaceans and insect larvae which it filters from the water with its gill rakers. Paddlefish are long-lived; 20-year-olds are common, and some live 30 years or more. They commonly exceed five feet in length and weights of 60 pounds.



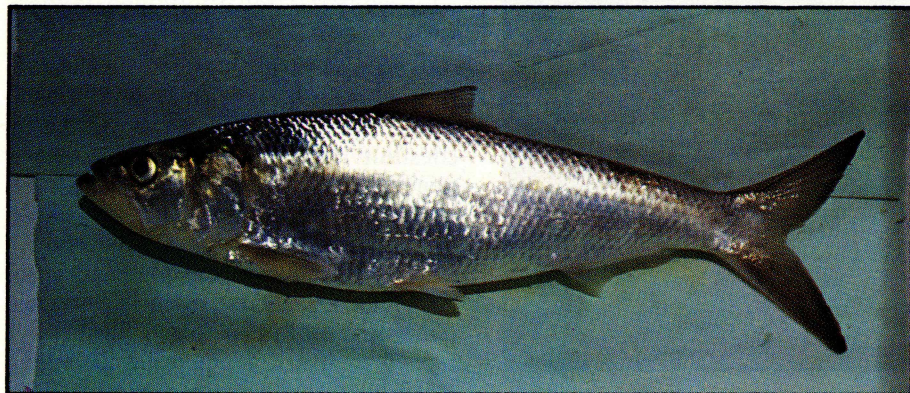
Longnose Gar
Lepisosteus osseus
 Gar family. Big-river region.

The longnose is the most widely distributed gar, but it is especially characteristic of oxbows and backwaters of Missouri's larger streams. Longnose gar young differ from adults in having a black stripe along the midside. Gars can gulp air into their swim bladder, in this way using it as a lung to survive in stagnant waters. The eggs are reported to be highly toxic to warm-blooded animals.



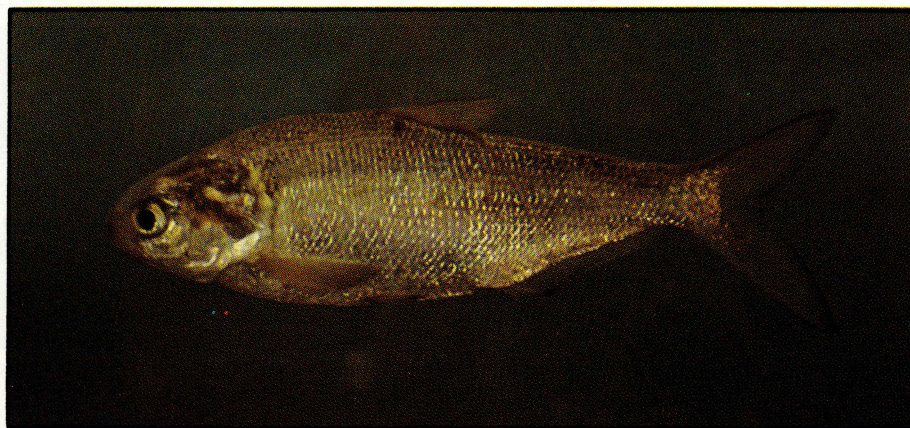
Skipjack Herring
Alosa chrysochloris
 Herring family. Big-river region.

The herring family includes some of the most valuable food fishes in the sea, but none of Missouri's four species are commonly eaten by man. The skipjack fights spectacularly when taken on a baited hook, and it makes an excellent trotline bait because its flesh contains an oil that is said to be very attractive to catfish.



Gizzard Shad
Dorosoma cepedianum
 Herring family. Wide-ranging.

One of the most common and widely distributed Missouri fishes, occurring in every principal stream system of the state. It is most abundant in reservoirs and large rivers. Gizzard shad travel in large, constantly moving schools and feed on microscopic animals, plants and aquatic insects. Young gizzard shad are a principal food for many larger fishes. Few live more than five years, and adults are commonly seven to 12 inches long.

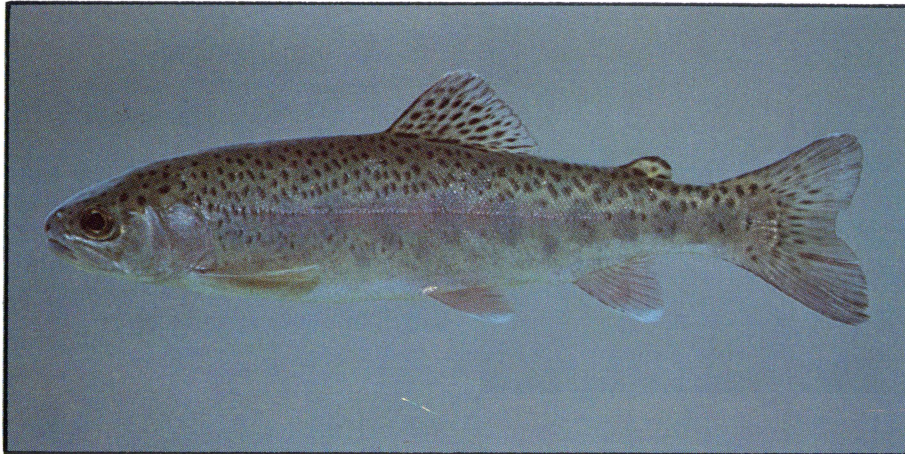


Don Wooldridge

Goldeye
Hiodon alosoides
 Mooneye family. Big-River region.

The goldeye is sometimes called "toothed herring" because of its superficial resemblance to herrings and the presence of prominent teeth in its mouth. The goldeye is sometimes caught on hook and line, but it is little valued as food because of the numerous, small bones.





Rainbow Trout

Salmo gairdneri

Trout family. Non-native, introduced into spring branches and cool rivers.

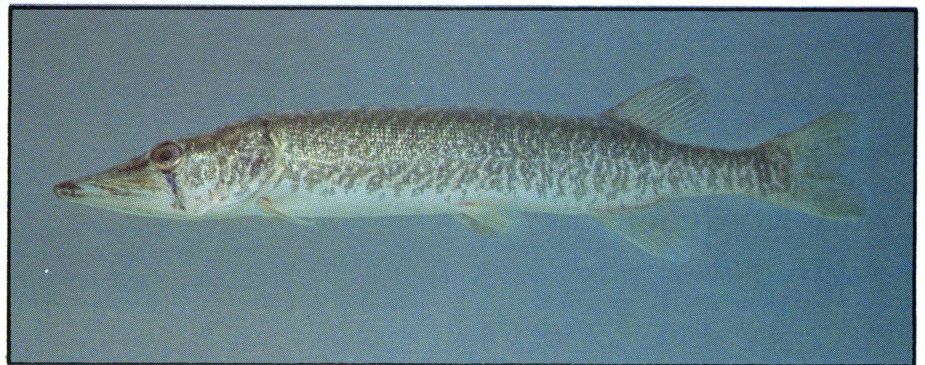
First introduced in Missouri in 1882, rainbow trout are restricted to a few areas of the Ozarks. Most are hatchery-grown and -stocked, but some naturally reproducing populations exist. They do best in waters which do not get above 70 degrees Fahrenheit. Rainbows feed mostly on terrestrial and aquatic insects. In Lake Taneycomo, where rapid growth conditions are favorable, rainbows grow about ¾-inch per month. A 15-inch rainbow weighs about 1½ pounds.

Grass Pickerel

Esox americanus

Pike family. Ozark and Lowland regions.

The pike family is characterized by a duck-bill-shaped snout and a large, many-toothed mouth. The grass pickerel is the most common of the three species native to Missouri. It is the smallest Missouri pike, seldom exceeding 12 inches in length.



Bleeding Shiner

Notropis zonatus

Minnow family. Ozark region.

Restricted to the Ozark uplands, this minnow inhabits clear, small to medium-sized streams with continuous strong flow. They occur in schools, feeding on insects found on the water's surface or drifting in the current. Spawning takes place in depressions or in the nests of other fishes. Adults reach a maximum length of 4.8 inches and live about three years.

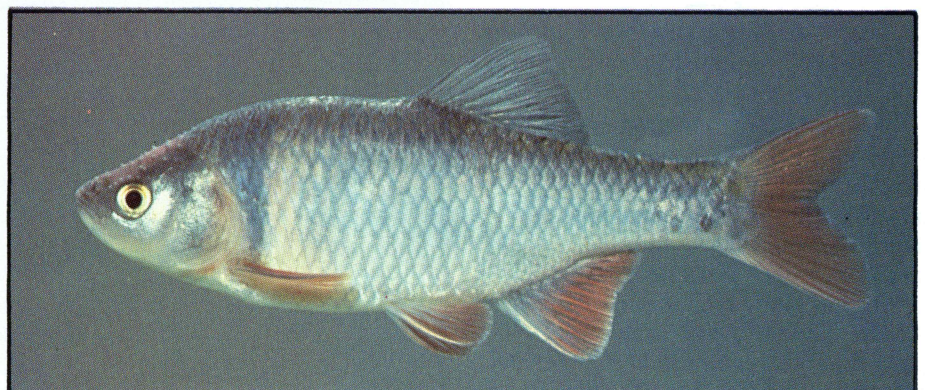


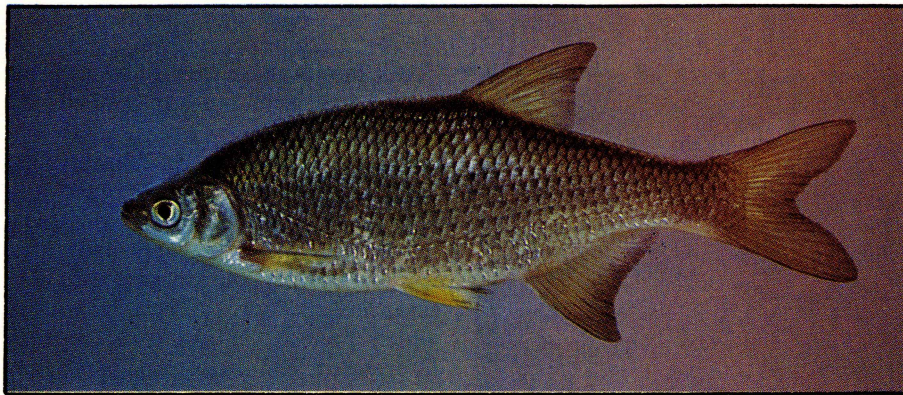
Red Shiner

Notropis lutrensis

Minnow family. Prairie region.

This beautiful minnow makes an attractive aquarium fish but should not be placed in a community tank because of its aggressive habits. It often spawns in sunfish nests where its eggs are unwittingly protected by the guardian male sunfish.



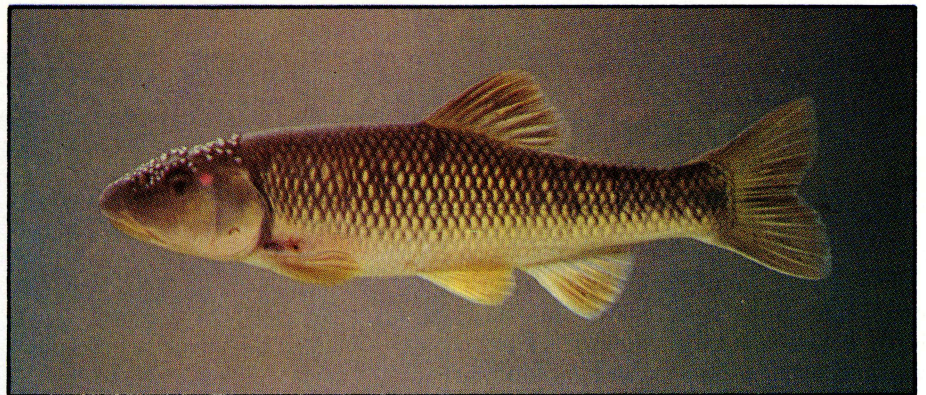


Golden Shiner
Notemigonus crysoleucas
 Minnow family. Prairie region.

This minnow is an excellent bait fish. Pond culture of the golden shiner is an important industry in Missouri. It is one of the largest minnows native to Missouri, reaching a length of about eight inches.

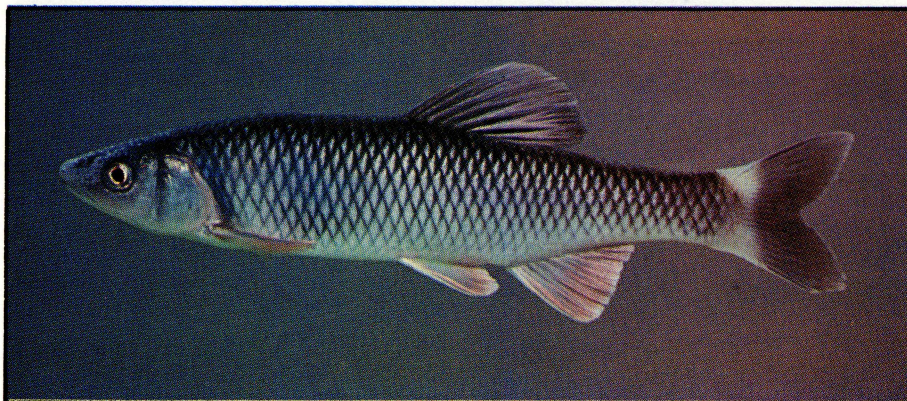
Hornyhead Chub
Nocomis biguttatus
 Minnow family. Ozark region.

The hornyhead chub reaches a length of 10 inches or more, and it will rise to an artificial fly much like a trout. This species nests in large gravel mounds in Ozark streams.



Whitetail Shiner
Notropis galacturus
 Minnow family. Ozark region.

The white patches at the base of the tail fin are the most visible feature of this attractive minnow as it swims about in clear streams of the southern Ozarks. It follows in the wake of swimmers or fishermen, feeding on aquatic insects stirred up by their activity.



Carp
Cyprinus carpio
 Minnow family. Non-native.

Since its introduction into Missouri in 1879, the carp has become one of the most widespread and abundant large fishes in the state. They are found in a wide variety of shallow-water habitats and feed chiefly on plant and animal material. Adults weigh from one to eight pounds, but can reach up to 50 pounds or more.

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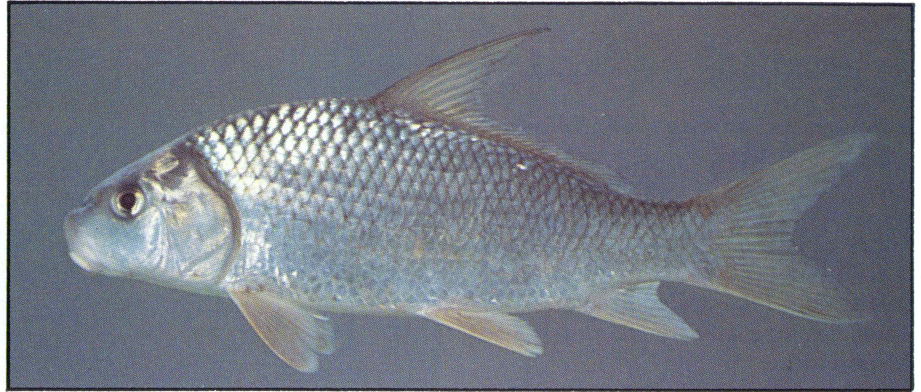


Quillback

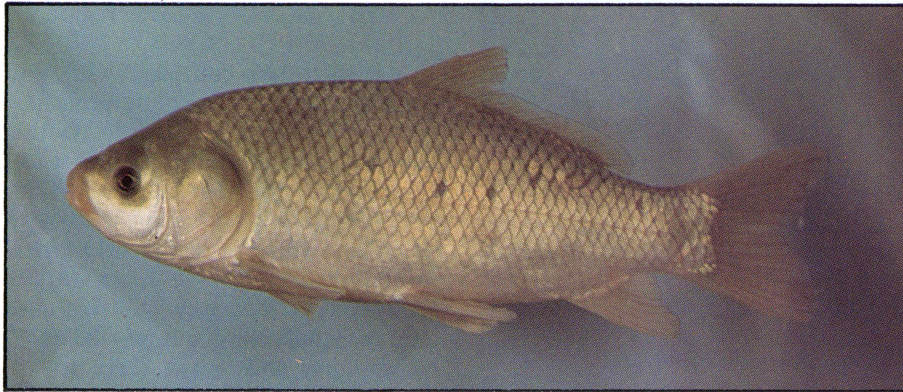
Carpiodes cyprinus

Sucker family. Prairie region.

This carpsucker is sometimes called "white carp" or "silver carp," because of its superficial similarity to the common carp. It is sometimes marketed by commercial fishermen, but the soft, bony flesh is little valued as food.



Charles Purkett



Bigmouth Buffalo

Ictiobus cyprinellus

Sucker family. Wide-ranging.

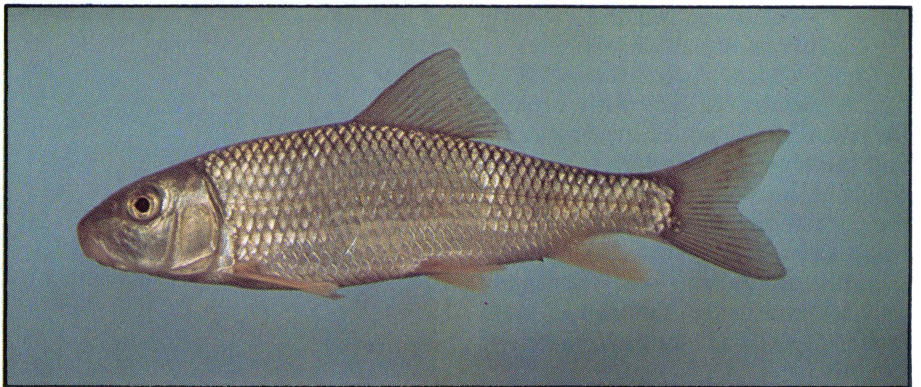
The bigmouth buffalo occurs over much of the state and is primarily an inhabitant of deep pools of large streams, lowland lakes and large reservoirs. It commonly occurs in schools in mid-water levels or near the bottom. Adults feed mostly on microcrustaceans and are seldom caught on hook and line. It is our largest sucker commonly reaching a length of 15 to 27 inches and a weight of two to 14 pounds.

Golden Redhorse

Moxostoma erythrurum

Sucker family. Ozark region.

The golden redhorse is most abundant in moderately clear, unpolluted streams having large, permanent pools and rocky or gravelly riffles. Adults occur in large schools, feeding on aquatic insect larvae. They usually do not live beyond six or seven years, and reach a maximum length of about 17 inches and a weight of 2.3 pounds.



Charles Purkett



Northern Hog Sucker

Hypentelium nigricans

Sucker family. Ozark region.

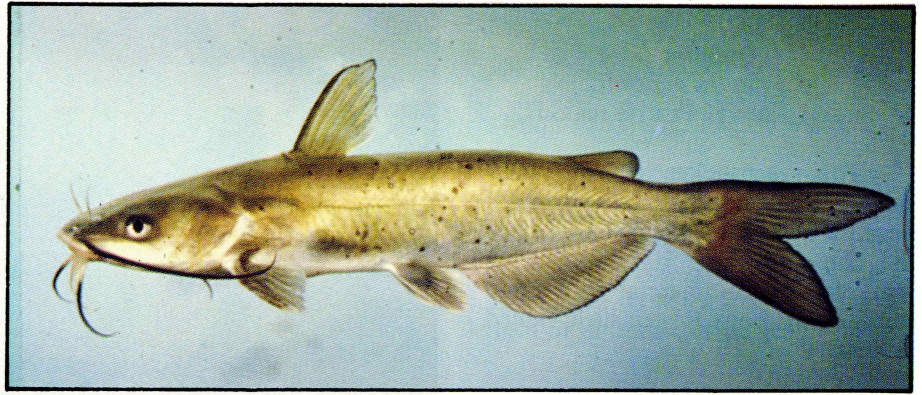
This species is sometimes called "boxhead" by Ozark natives because of its squarish, bony head. Its strongly mottled and barred appearance makes the hog sucker nearly invisible as it lies among rocks of the stream bottom. It is seldom caught on a baited hook but may be taken by gigging, snagging and snaring.

Channel Catfish

Ictalurus punctatus

Catfish family. Wide-ranging.

A slender catfish with a deeply forked tail. Young have spots which disappear with age. The channel cat is the most abundant and widely distributed large catfish in Missouri streams. Its diet includes animal and plant material. Adults are commonly 12 to 32 inches long and weigh from 0.5 to 15 pounds.



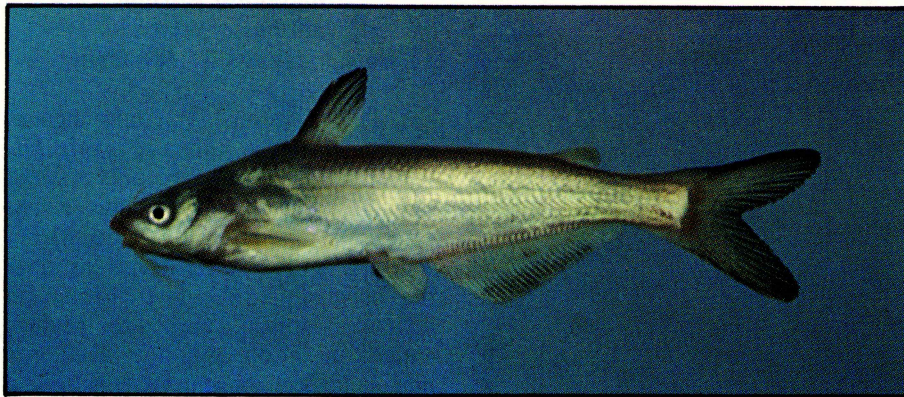
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Blue Catfish

Ictalurus furcatus

Catfish family. Big-River region.

Most often confused with the channel catfish, although it never has spots, and the outer margin of the anal fin is straight rather than curved. It occurs in the swift channels and pools of the Missouri and Mississippi rivers and their principal tributaries (called "white cat" in Lake of the Ozarks.) The diet is mostly fish and insects. Adults are commonly 20 to 44 inches long and weigh three to 40 pounds; some reach 100 pounds or more.



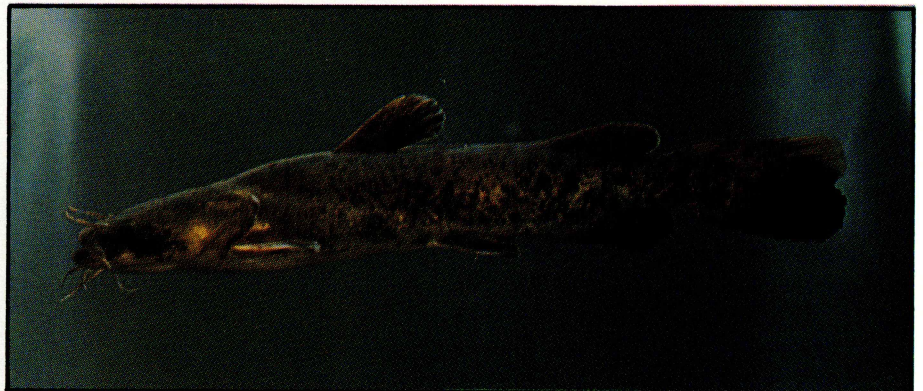
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Flathead Catfish

Pylodictis olivaris

Catfish family. Wide-ranging.

A slender catfish with broadly flattened head, projecting lower jaw and splotchy, light or dark brown color. It is one of the most abundant large catfishes in the Missouri and Mississippi rivers and their larger tributaries. Adults eat fish and crayfish and are commonly 15 to 45 inches long and weigh one to 45 pounds.



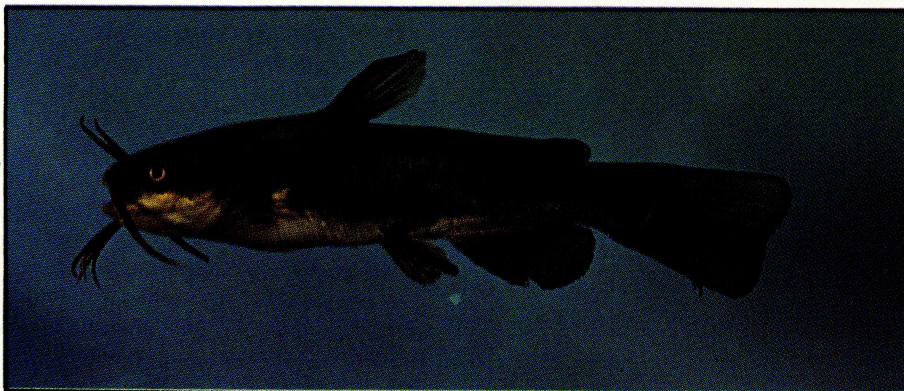
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Black Bullhead

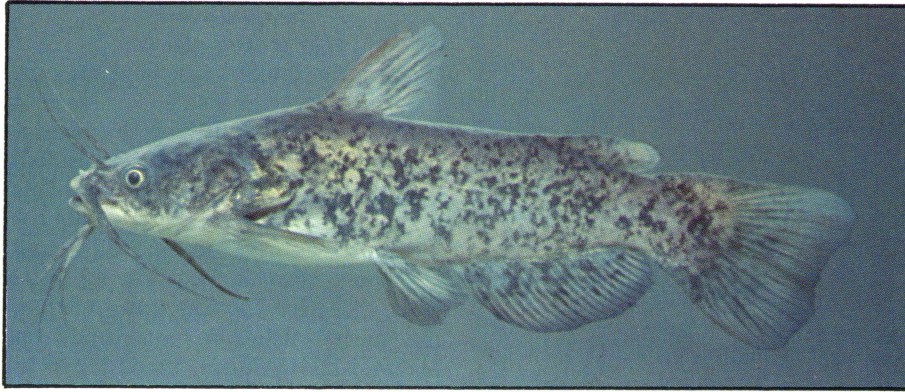
Ictalurus melas

Catfish family. Prairie region.

A chubby catfish with a slight notch in the tail fin. Primarily a bottom feeder on a variety of plant and animal matter. It is most abundant in slow-moving, turbid streams with soft bottoms. Adults seldom exceed lengths of 16 inches and weights of two pounds.



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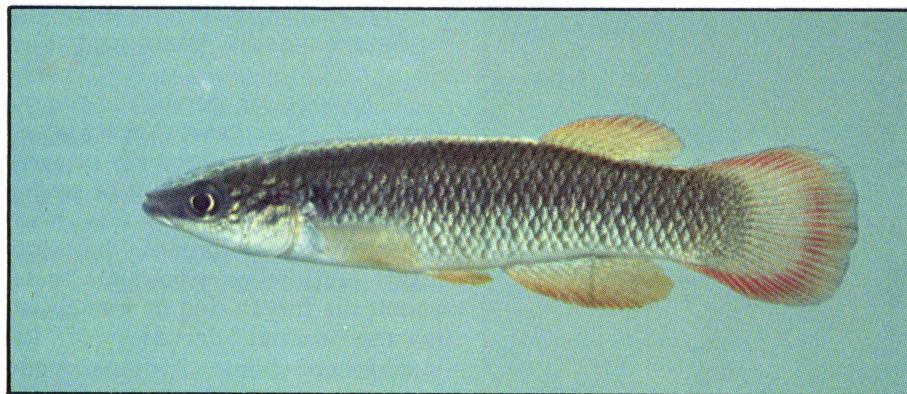
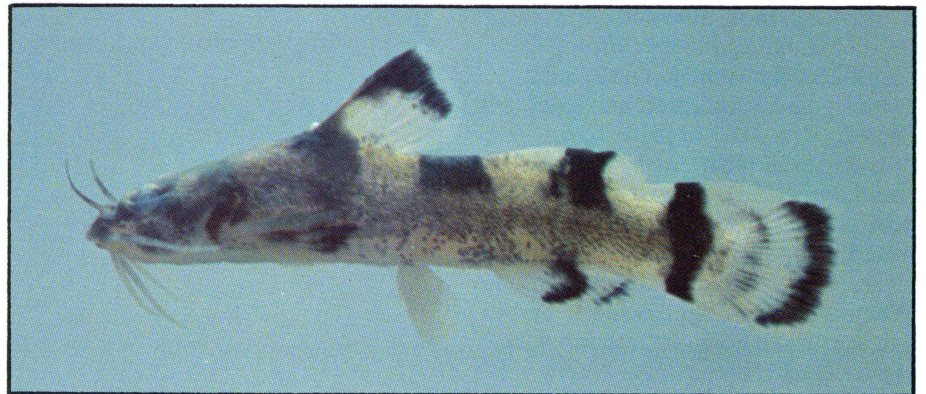


Brown Bullhead
Ictalurus nebulosus
Catfish family. Lowland region.

This catfish differs from the black bullhead in its strongly mottled appearance and sawlike teeth on the pectoral spine. The brown bullhead is fairly common in Mingo Swamp but is otherwise rare in Missouri.

Checkered Madtom
Noturus flavater
Catfish family. Ozark region.

Like all madtoms, this small catfish possesses a mild venom associated with the pectoral spine. It is another of the fish species unique to the Ozarks. This secretive fish hides beneath stones in the daytime and is active at night or when the stream is muddy following heavy rains.



Plains Topminnow
Fundulus sciadicus
Killifish family. Ozark region.

The topminnows are so named for their habit of skimming along just beneath the water's surface, feeding on insects and other small animals found there. The plains topminnow adapts well to aquarium life and makes an attractive, interesting aquarium fish.

Plains Killifish
Fundulus zebrinus
Killifish family. Prairie region.

This species does not occur widely in Missouri, but is the most abundant fish in the saline waters of Salt Creek below Boone's Lick Spring in Howard County. It hides from predators by wriggling into the sandy bottom, coming to rest with only its head showing.





Mosquitofish

Gambusia affinis

Livebearer family. Lowland region.

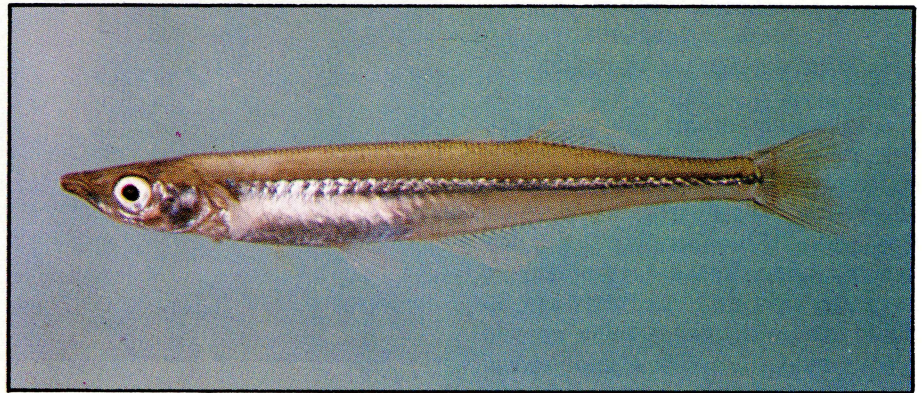
The mosquitofish has the distinction of being the only Missouri fish that gives birth to living young. This species has been widely stocked for mosquito control in Missouri and elsewhere, but it is probably little more effective for this purpose than the native fishes it sometimes replaces. Males seldom exceed 1.2 inches in length, and females reach a length of 2.8 inches.

Brook Silverside

Labidesthes sicculus

Silversides family. Ozark and Lowland regions.

A small fish with a beaklike snout, superficially resembling a minnow. Their body is so translucent that internal organs are visible. Found in clear, warm streams and reservoirs. When a beam of light is shone on the surface, silversides are attracted and concentrated by the light. Adults feed on insects and reach a length of 4.4 inches.



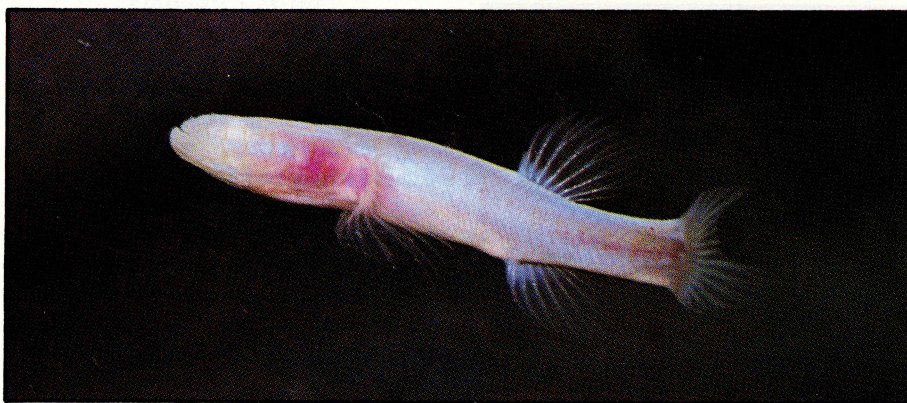
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Southern Cavefish

Typhlichthys subterraneus

Cavefish family. Ozark region.

The southern cavefish is one of two blind, white fishes that are occasionally pumped from wells or seen near the mouths of springs or caves. The head, body and fins bear numerous sense organs that are highly sensitive to vibrations; these permit the fish to find its way about in the eternal darkness of its underground home. The maximum length of the southern cavefish is about 3.4 inches.



Tom Johnson

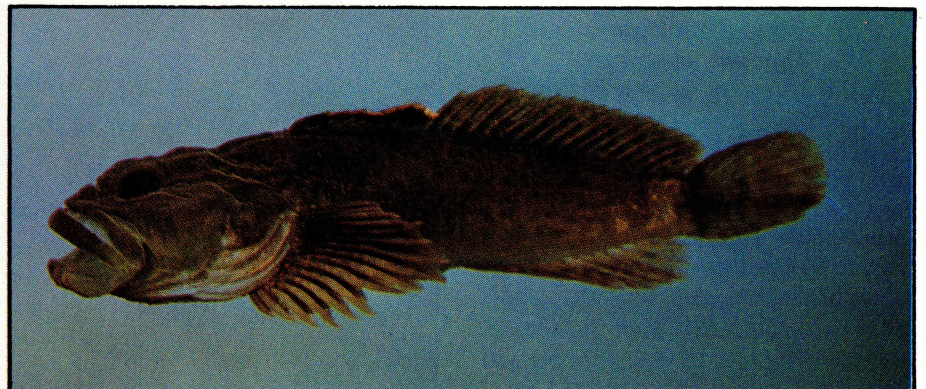
Mottled Sculpin

Cottus bairdi

Sculpin family. Ozark region.

This species has a rather grotesque appearance because of the broad, flattened head and large, fan-shaped pectoral fins. It is abundant in the same waters favored by trout and is frequently caught by trout fishermen.

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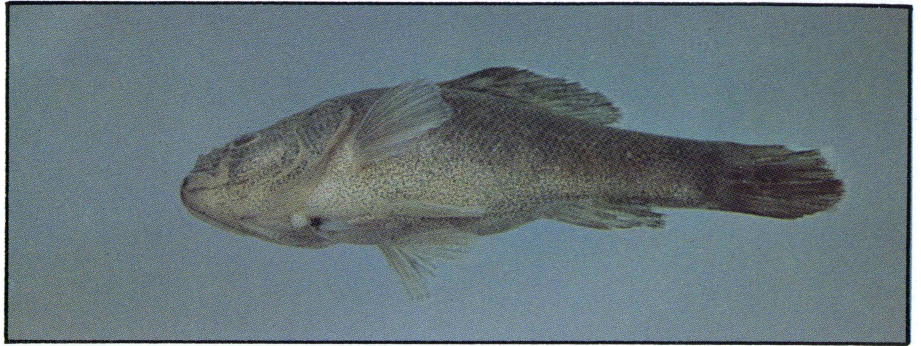


Pirate Perch

Aphedoderus sayanus

Pirate Perch family. Lowland region.

This solitary, secretive fish hides in thick growths of aquatic plants, venturing out to feed at night. The anus is situated on the throat, an adaptation shared with the cave-fishes, which transfer their eggs from the anus to the gill cavity for incubation.



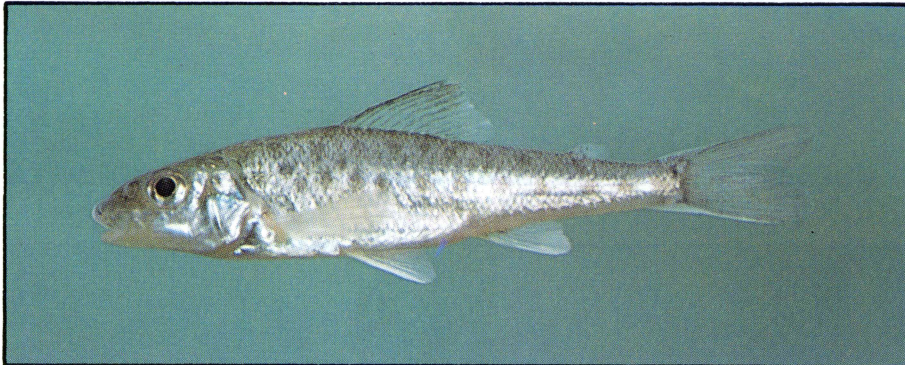
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Trout-perch

Percopsis omiscomaycus

Trout-perch family. Prairie region.

This peculiar little fish combines the characters of both soft-rayed and spiny-rayed fishes, having a fleshy adipose fin like a trout and rough-edged scales like a sunfish or perch. It is uncommon in Missouri and may be declining due to changing agricultural practices in prairie watersheds.



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White Bass

Morone chrysops

Sea Bass family. Big-river region.

A silvery, spiny-rayed fish with several dark, horizontal streaks along the sides. Formerly abundant only in the Mississippi River and principal tributaries, it now is plentiful in many large reservoirs. White bass are active schooling fish, with adults feeding primarily on forage fish such as the gizzard shad. Their life span is seldom more than four years, and few reach lengths of more than 17.5 inches or weights of more than 2¾ pounds.



Jim Whitley

Largemouth Bass

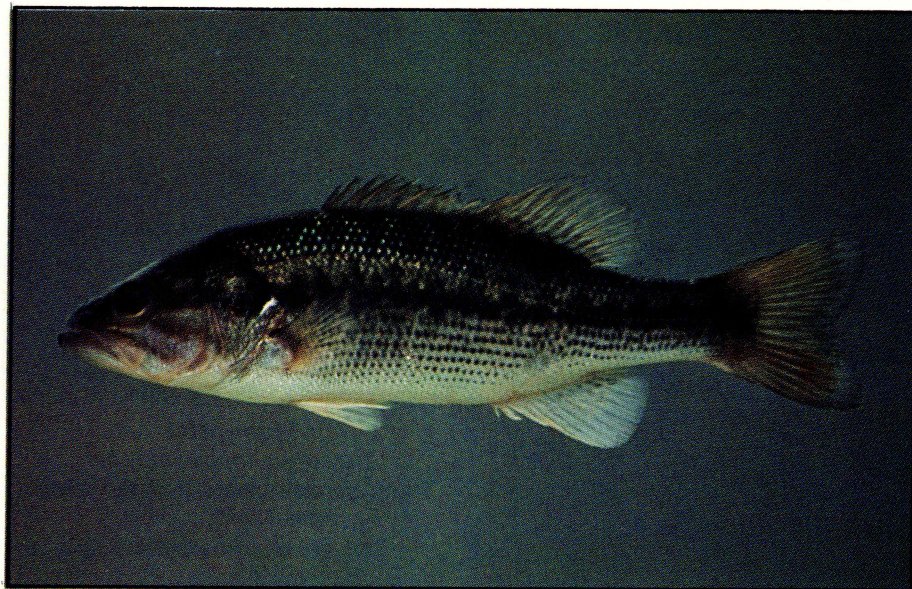
Micropterus salmoides

Sunfish family. Wide-ranging.

The largemouth is the largest member of the sunfish family and the most abundant bass in Missouri lakes and slow-moving streams. Often confused with the smallmouth and spotted bass, it is distinguished by its large mouth extending beyond the rear edge of the eye, and side markings which generally appear as a broad, continuous stripe. Young bass feed on small insects; adults eat insects, crayfish and fish. Adults weigh about two pounds and are about 15 inches long at five years of age.



Charles Purkett



Spotted Bass

Micropterus punctulatus

Sunfish family. Lowland and southeastern Ozark regions.

Spotted bass are the most abundant bass in lowland streams and in the main channels of large, warm rivers within the Ozark region. It is easily confused with the largemouth bass, but adults can be distinguished by a mouth which reaches to or slightly beyond the rear margin of the eye, and by spots on the lower side which form prominent rows. Insects and crayfish are the principal diet of all sizes of spotted bass. Few spotted bass live longer than six years or attain a weight of more than three pounds.

Smallmouth Bass

Micropterus dolomieu

Sunfish family. Ozark region.

The smallmouth is the dominant predator fish in the cool, clear, permanently flowing streams of the Ozarks. It is identified by its smaller mouth, which almost reaches the rear margin of the eye, and a series of vertical bars on the sides. The young feed on insect larvae; adults feed on fish and crayfish. Smallmouth weigh about 1½ pounds and are about 14 inches long at five years of age.



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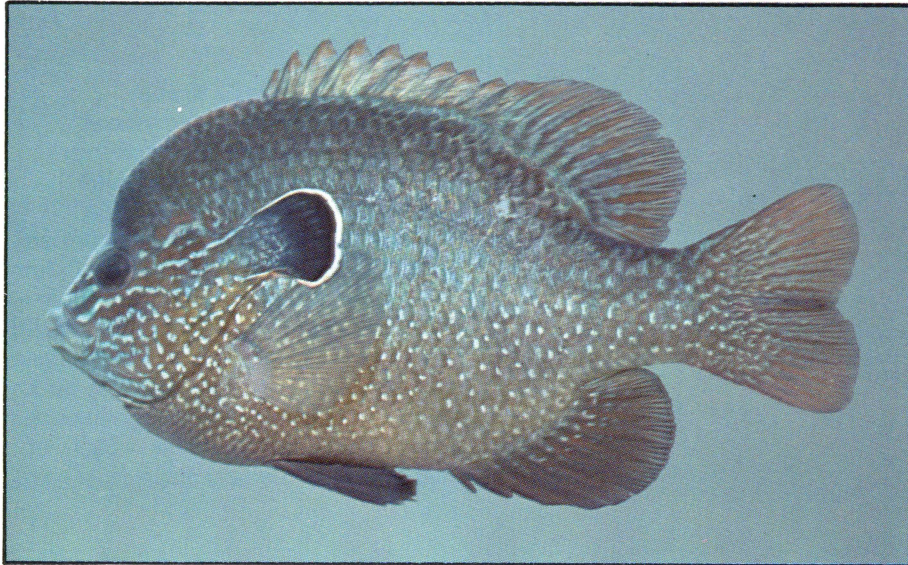


Green Sunfish

Lepomis cyanellus

Sunfish family. Wide-ranging.

A thick-bodied sunfish with a large mouth, the green sunfish is the most widely distributed Missouri fish, occurring in virtually every stream in the state. Insects, small fish and crayfish are the principal food items. Few exceed a length of nine inches or a weight of ¾ pound; occasional individuals may reach two pounds.

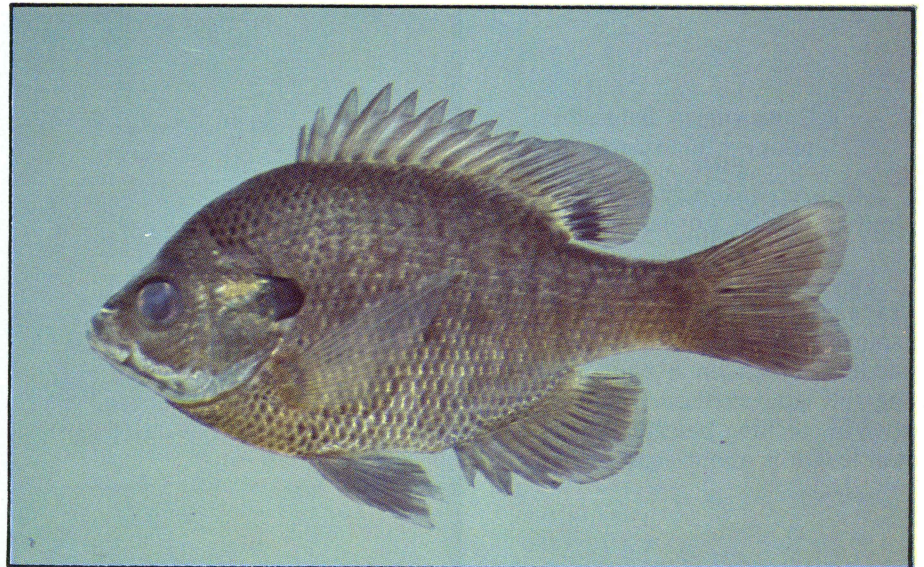


Longear Sunfish
Lepomis megalotis
 Sunfish family. Ozark and
 Lowland regions.

The elongated ear flap is the most distinguishing feature of this sunfish. It is characteristic of clear, permanently flowing streams with sandy or rocky bottoms. It is a relatively small sunfish, reaching a length of five inches in five years.

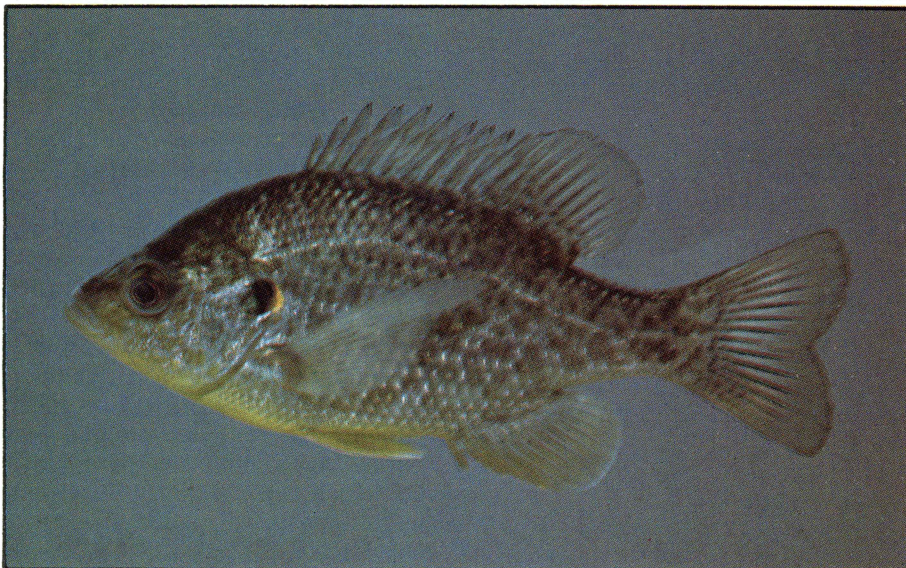
Bluegill
Lepomis macrochirus
 Sunfish family. Wide-ranging.

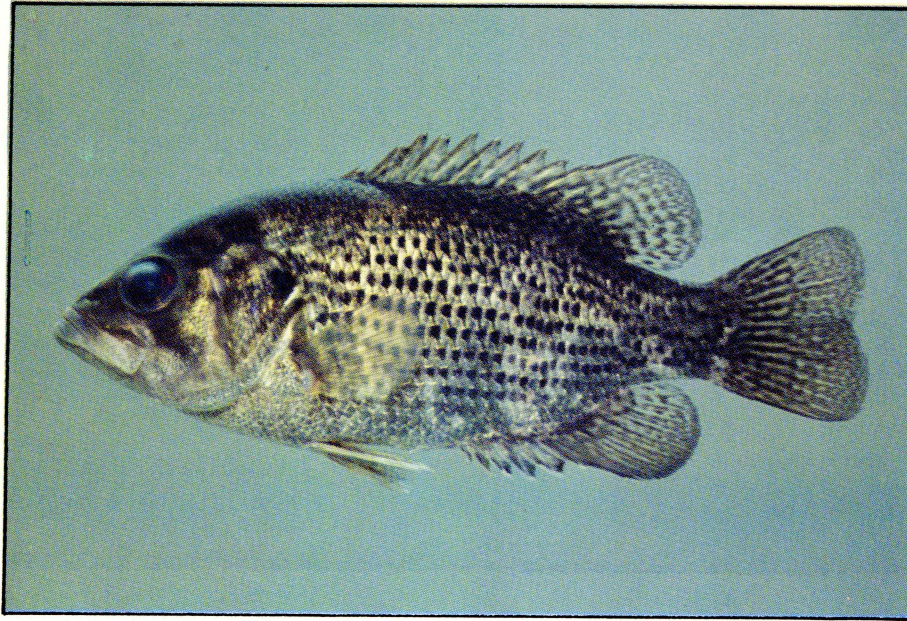
Bluegill are deep-bodied sunfish with a small mouth and a characteristic dark ear flap. The bluegill is the most abundant sunfish in ponds and lakes throughout the state, thriving best in warm, clear water which has abundant aquatic plants. Insects are the staple food item. Growth varies considerably; they commonly reach a length of six inches and a weight of five ounces.



Redear Sunfish
Lepomis microlophus
 Sunfish family. Ozark region.

The redear has a rather small mouth and a distinctive ear flap which has a prominent orange or red spot. Although introduced to other locations, their natural occurrence is confined to warm, clear waters of the extreme southern portion of the state. Food consists primarily of snails, earning it the common name of shellcracker. Adults may reach a length of 11 inches and a weight of one pound.



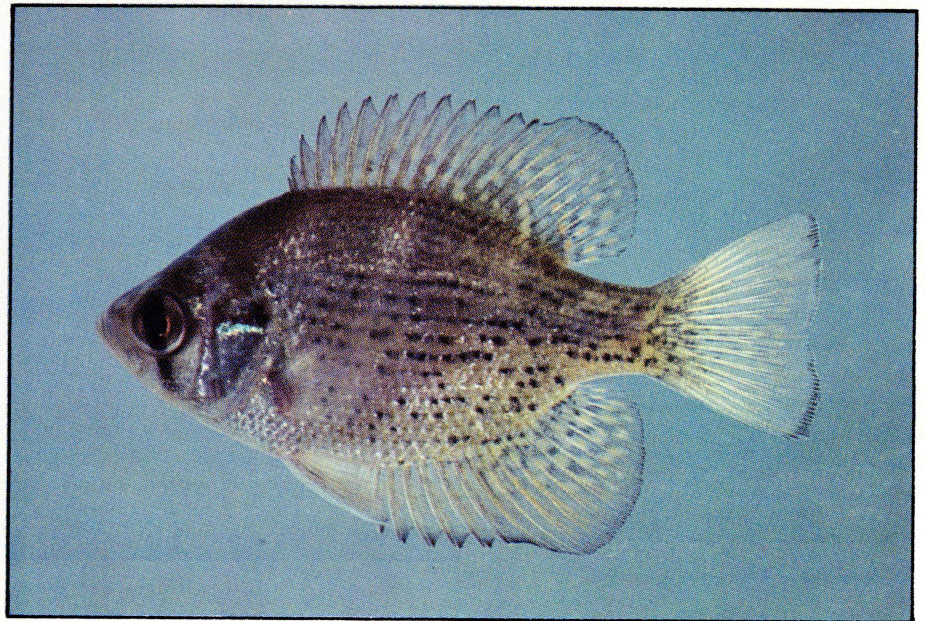


Rock Bass
Ambloplites rupestris
 Sunfish family. Ozark region.

This is a heavy-bodied sunfish with a large mouth. It is one of the most widely distributed and characteristic sunfish in clear Ozark streams. Aquatic insects, small minnows and crayfish make up the bulk of its diet. Adults commonly attain a length of 11 inches and a weight of one pound.

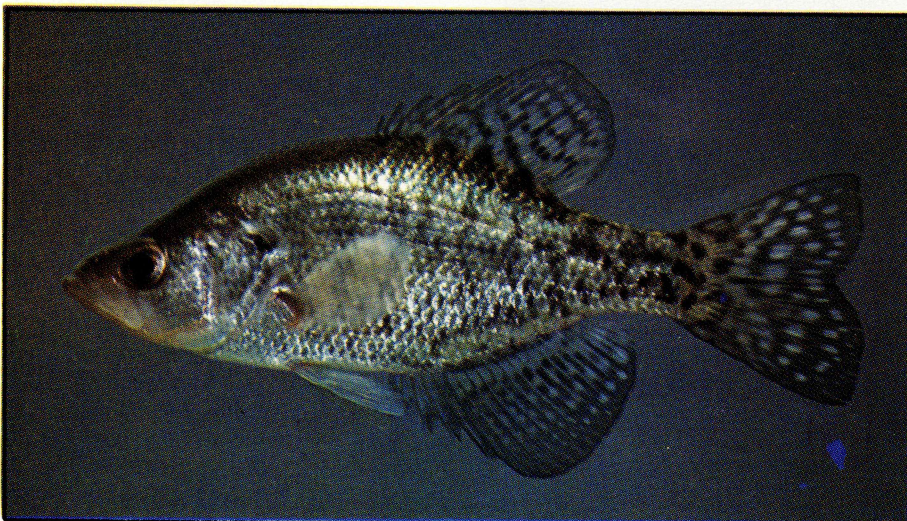
Flier
Centrarchus macropterus
 Sunfish family. Lowland region.

This slab-sided sunfish resembles a crappie but differs in having 11 to 13 spines in the dorsal (back) fin. It is sometimes taken on a baited hook, using the same methods that are effective in catching bluegill. The maximum length is about eight inches.



White Crappie
Pomoxis annularis
 Sunfish family. Wide-ranging.

A silvery, deep and slab-sided sunfish with a large mouth, the white crappie is the more abundant and widespread of the two crappies in Missouri. It feeds principally on small fishes, aquatic insects and microcrustaceans. Small gizzard shad are the staple food for adult crappie in reservoirs. Adults may reach a length of 15 inches and a weight of two pounds.

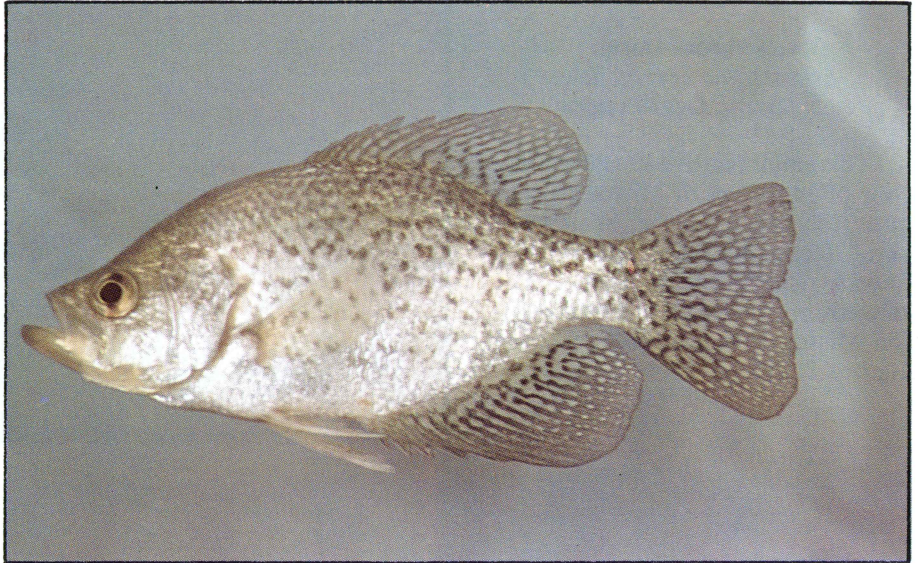


Black Crappie

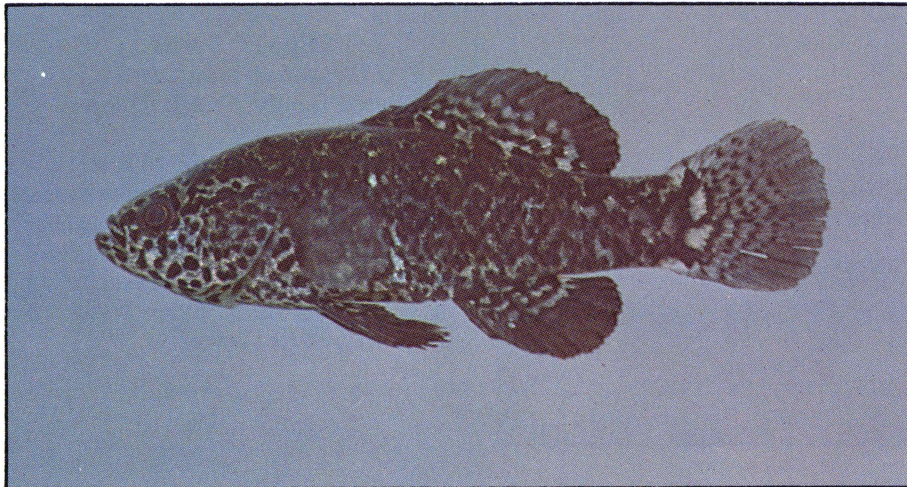
Pomoxis nigromaculatus

Sunfish family. Wide-ranging.

Very similar in appearance to the white crappie except for the darker markings, and dorsal fin with seven or eight spines rather than five or six. Black crappie are less tolerant of muddy water than white crappie and prefer areas of abundant aquatic plants. Growth is about the same as for white crappie, except that at any given size, black crappie are heavier.



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Banded Pygmy Sunfish

Elassoma zonatum

Sunfish family. Lowland region.

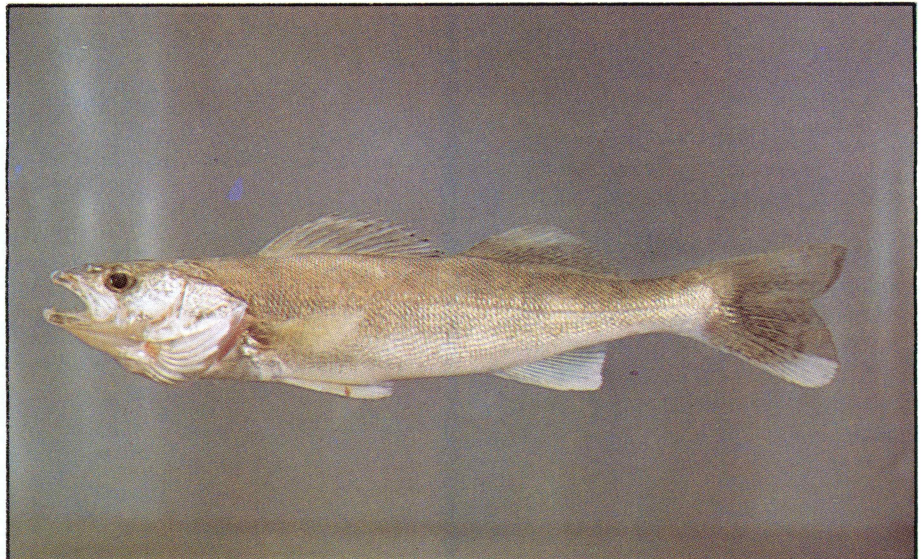
True to its name, this diminutive sunfish seldom exceeds a length of 1.5 inches. It does not prepare a nest as do other sunfishes, but simply scatters the eggs over debris lying on the bottom.

Walleye

Stizostedion vitreum

Perch family. Wide-ranging.

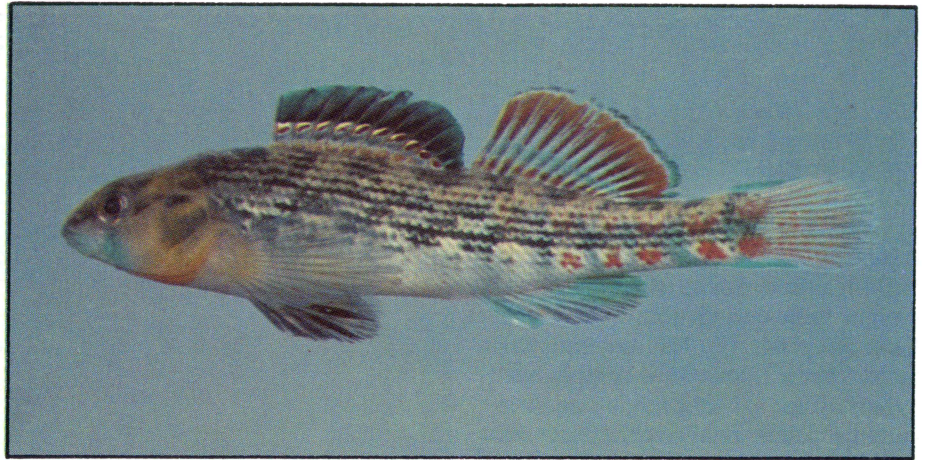
The walleye occurs in large streams throughout Missouri. It is a nocturnal fish, feeding in late evening and moving to deep water during the day. Fish are the principal food of adult walleye. Adults are commonly 12 to 28 inches long and weigh from one-half pound to eight pounds; a 20-inch walleye weighs about three pounds.



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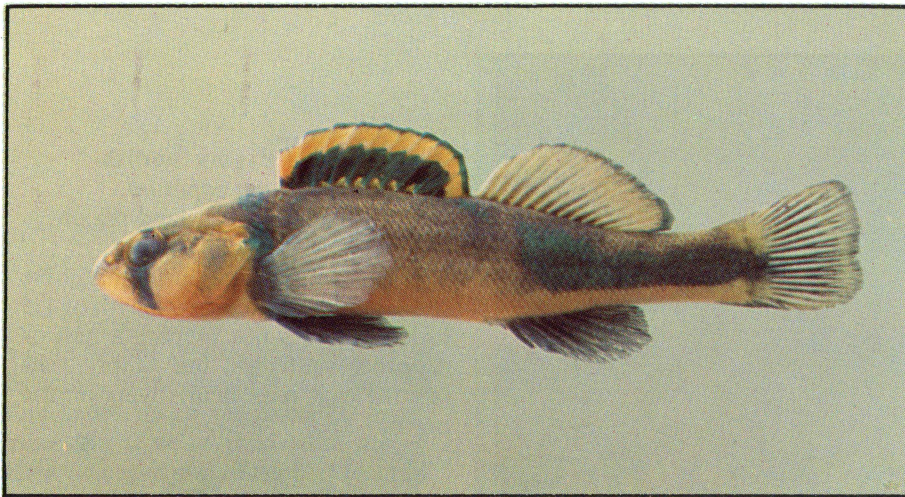
Orangethroat Darter
Etheostoma spectabile
Perch family. Ozark region.

This small relative of the walleye is one of 34 species of Missouri fishes collectively called darters. Their name comes from the habit of moving about by short, quick dashes. The orangethroat is one of the most common Missouri darters. Its maximum length is 2.5 inches.



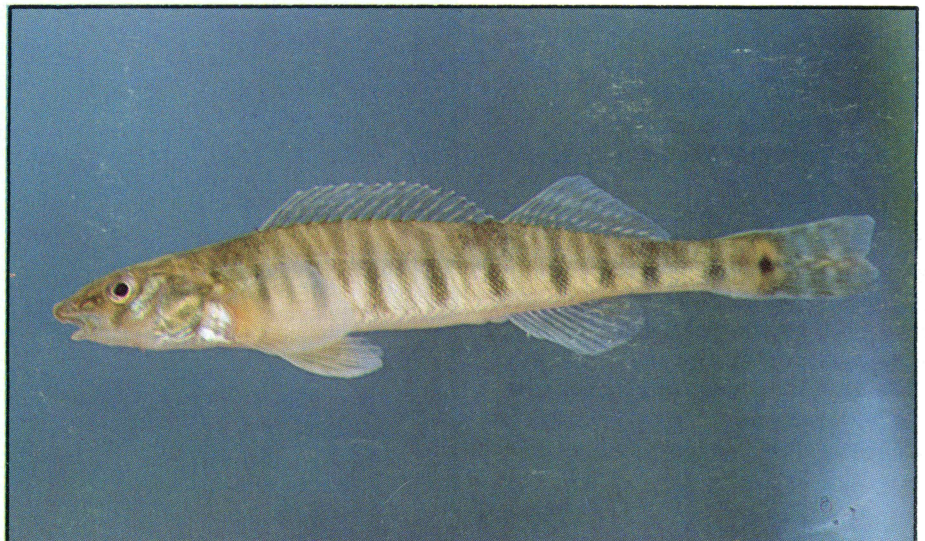
Stippled Darter
Etheostoma punctulatum
Perch family. Ozark region.

This darter is one of 14 species of Missouri fishes that are unique to the Ozark region; they occur nowhere else in the world. It lives in small creeks and spring branches, hiding most of the time under rocks or water-soaked tree leaves.



Logperch
Percina caprodes
Perch family. Ozark region.

The logperch differs from other Missouri darters in having a distinctly conical snout it uses to turn over rocks in search of food. It reaches a length of seven inches or more and occasionally is caught on a baited hook.



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